

WHAT IS CLAIMED IS:

1. A wavelet inverse transform device comprising:

decoding object coefficient extracting means for extracting only coefficients necessary for decoding a specified area from wavelet transform coefficients; and

wavelet inverse transform means for inverse transforming coefficients extracted from said decoding object coefficient extracting means;

wherein

said decoding object coefficient extracting means extracts transform coefficients not only inside said specified area but also those outside said specified area.

2. The wavelet inverse transform device according to claim 1 further comprising:

decoding object area determining means for determining a decoding object area, said decoding object coefficient extracting means extracting coefficients necessary for decoding an area determined by said decoding object area determining means.

3. The wavelet inverse transform device according to claim 1 wherein

said wavelet transform coefficients are made up of transform coefficients of a plurality of splitting levels and include transform coefficients inside of and on an outer rim side of each splitting level based specified area.

4. The wavelet inverse transform device according to claim 1 wherein

transform coefficients on the outer rim side of the specified area extracted by said decoding object coefficient extracting means correspond to the number of

impulse responses of a filter used in said wavelet inverse transform means.

5. The wavelet inverse transform device according to claim 3 wherein said wavelet transform coefficients are obtained on hierarchically splitting a low range component of a plurality of splitting levels.

6. The wavelet inverse transform device according to claim 1 wherein, of transform coefficients generated by said wavelet inverse transform means, those in a valid range based on overlap holding processing are extracted.

7. The wavelet inverse transform device according to claim 6 wherein extraction of the coefficients in the valid range based on said overlap holding processing is performed from one level of the wavelet splitting to another.

8. A wavelet inverse transform method comprising:

a decoding object coefficient extracting step of extracting only coefficients necessary for decoding a specified area from wavelet transform coefficients; and

a wavelet inverse transforming step of inverse transforming coefficients extracted in said decoding object coefficient extracting step;

wherein

said decoding object coefficient extracting step extracts transform coefficients not only inside said specified area but also those on an outer rim of said specified area.

9. A wavelet decoding device comprising:

entropy decoding means for entropy decoding an encoded bitstream, generated on wavelet inverse transforming a picture;

decoding object coefficient extracting means for extracting, from among wavelet transform coefficients obtained by said entropy decoding means, those necessary for decoding a specified area; and

wavelet inverse transforming means for inverse transforming the coefficients extracted by said decoding object coefficient extracting means;

wherein

said decoding object coefficient extracting means extracts transform coefficients not only in said specified area but also those on an outer rim of said specified area.

10. The wavelet decoding device according to claim 9 further comprising:

dequantizing means for dequantizing the quantized coefficients obtained by said entropy decoding means to restore wavelet transform coefficients, said decoding object coefficient extracting means extracting coefficients necessary for decoding the specified area from among the wavelet transform coefficients obtained by said dequantizing means.

11. The wavelet decoding device according to claim 9 further comprising:

decoding object area determining means for determining a decoding object area, said decoding object coefficient extracting means extracting coefficients necessary for decoding an area determined by said decoding object area determining means.

12. The wavelet decoding device according to claim 9 wherein

said wavelet transform coefficients are made up of transform coefficients of a plurality of splitting levels and include transform coefficients inside of and on an outer

rim side of each splitting level based specified area.

13. The wavelet decoding device according to claim 9 wherein

transform coefficients on the outer rim side of the specified area extracted by said decoding object coefficient extracting means correspond to the number of impulse responses of a filter used in said wavelet inverse transform means.

14. The wavelet decoding device according to claim 12 wherein said wavelet transform coefficients are obtained on hierarchically splitting low range components of a plurality of splitting levels.

15. The wavelet decoding device according to claim 9 wherein, of transform coefficients generated by said wavelet inverse transform means, those in a valid range based on overlap holding processing are extracted.

16. The wavelet decoding device according to claim 15 wherein extraction of the coefficients in the valid range based on said overlap holding processing is performed from one level of the wavelet splitting to another.

17. A wavelet decoding method comprising:

an entropy decoding step of entropy decoding an encoded bitstream, generated on wavelet inverse transforming a picture;

a decoding object coefficient extracting step of extracting, from among wavelet transform coefficients obtained by said entropy decoding step, those necessary for decoding a specified area; and

a wavelet inverse transforming step of inverse transforming the coefficients

extracted by said decoding object coefficient extracting step;

wherein

said decoding object coefficient extracting step extracts transform coefficients not only in said specified area but also those on an outer rim of said specified area.

18. The wavelet decoding method according to claim 17 further comprising:

a dequantizing step of dequantizing the quantized coefficients obtained by said entropy decoding step, said decoding object coefficient extracting step extracting coefficients necessary for decoding the specified area from among the wavelet transform coefficients obtained by said dequantizing step.